

-10-

CLAIMS:

1. A concrete screed comprising
a frame including a first foot,
5 a vibrator coupled to the frame,
a tubular screed bar formed to include an interior region, and
a mount coupling the frame to the screed bar to transmit vibration
caused by the vibrator to the screed bar, the mount including a core positioned in the
interior region of the screed bar to reinforce the screed bar and means for anchoring
10 the first foot to the core without the first foot extending into the interior region.
2. The concrete screed of claim 1, wherein the frame includes a
second foot and the mount includes means for anchoring the second foot to the core
without the second foot extending into the interior region.
3. The concrete screed of claim 2, wherein the screed bar includes
15 a rectangular tubular portion and a triangular tubular portion, the rectangular tubular
portion has a rectangle-shaped cross-section and is formed to include a first chamber,
the triangular tubular portion has a triangle-shaped cross-section and is formed to
include a second chamber separated from the first chamber by a vertical common wall
shared by the rectangular tubular portion and the triangular tubular portion,
- 20 4. The concrete screed of claim 1, wherein the screed bar includes
a rectangular tubular portion and a triangular tubular portion, the rectangular tubular
portion has a rectangle-shaped cross-section and is formed to include a first chamber,
the triangular tubular portion has a triangle-shaped cross-section and is formed to
include a second chamber separated from the first chamber by a vertical common wall
25 shared by the rectangular tubular portion and the triangular tubular portion, the core is
positioned in the first chamber, and the anchoring means includes a shoe positioned
on the rectangular tubular portion, a first fastener extending from the shoe through the
rectangular tubular portion into the core to couple the shoe to the core, and a
releasable retainer coupling the first foot to the shoe for release therefrom.
- 30 5. The concrete screed of claim 4, wherein the rectangular tubular
portion includes a vertical rear wall and a horizontal top wall connecting the rear wall
and the common wall, the shoe includes an intermediate plate positioned on the top

-11-

wall in face-to-face contact with the top wall, a rear plate depending from the intermediate plate along the rear wall in face-to-face contact with the rear wall, a front plate extending upwardly from the intermediate plate, a reinforcement web extending from the front plate to the intermediate plate, a junction reinforcement rib extending
5 along a junction between the intermediate plate and the rear plate, and a plate reinforcement rib extending from the junction reinforcement rib along the rear plate, the first fastener extends through the intermediate plate and the top wall into the core, the anchoring means includes a second fastener extending through the rear plate and the rear wall into the core, and the releasable retainer is coupled to the front plate and
10 includes a rotatable lever portion to promote quick release of the first foot.

6. The concrete screed of claim 4, wherein the rectangular tubular portion includes a horizontal top wall extending rearwardly from the common wall and a vertical rear wall parallel to the common wall, the triangular tubular portion includes an inclined wall extending forwardly from the common wall, the core
15 includes a first core member positioned in the first chamber between the rear wall and the common wall and a second core member positioned in the second chamber between the common wall and the inclined wall, and the anchoring means includes a shoe, a fastener, and a releasable retainer, the shoe includes a rear plate extending along the rear wall, a front plate extending along the inclined wall, an intermediate
20 plate connecting the rear plate and the front plate and extending along the top wall, and a retainer receiver plate extending upwardly from a junction formed between the front plate and the intermediate plate, the releasable retainer is coupled to the retainer receiver plate, and the fastener extends through the rear plate, the first core member, the common wall, the second core member, the inclined wall, and the front plate.

25 7. The concrete screed of claim 1, wherein the screed bar includes a horizontal top wall and a vertical rear wall extending downwardly from the top wall, the anchoring means includes a shoe, first and second fasteners, and a releasable retainer, the shoe includes an upper plate extending along the top wall, a rear plate depending from the upper plate and extending along the rear wall, and a retainer
30 receiver plate extending upwardly from a junction formed between the upper plate and the rear plate and receiving the releasable retainer, the first fastener extends through the upper plate and the top wall into the core, and the second fastener extends through the rear plate and the rear wall into the core.

-12-

8. A concrete screed comprising
a screed bar formed to include an interior region,
a bar mover adapted to move the screed bar over concrete, the bar
mover including a first attachment portion, and
5 a mount coupling the bar mover to the screed bar, the mount including
a core positioned in the interior region and a first anchor anchoring the first
attachment portion to the core without the first attachment portion extending into the
interior region.
9. The concrete screed of claim 8, wherein the first anchor
10 includes a mounting bracket positioned on the screed bar, a first fastener extending
from the mounting bracket through the screed bar into the core, and a releasable
retainer coupling the attachment portion to the mounting bracket for release
therefrom.
10. The concrete screed of claim 9, wherein the screed bar includes
15 a rectangular tubular portion and a triangular tubular portion, the rectangular tubular
portion has a rectangle-shaped cross-section and is formed to include a first chamber,
the triangular tubular portion has a triangle-shaped cross-section and is formed to
include a second chamber separated from the first chamber by a vertical common wall
shared by the rectangular tubular portion and the triangular tubular portion, the core
20 substantially fills the first chamber, the mounting bracket is positioned on the
rectangular tubular portion, and the first fastener extends from the mounting bracket
through the rectangular tubular portion into the core.
11. The concrete screed of claim 10, wherein the rectangular
tubular portion includes a vertical rear wall and a horizontal top wall connecting the
25 rear wall and the common wall, the mounting bracket includes a horizontal
intermediate plate positioned in face-to-face contact with and coupled to the top wall
by use of the first fastener and a second fastener which both extend through the
intermediate plate and the top wall into the core, a rear plate depending from the
intermediate plate along the rear wall such that the rear plate is positioned in face-to-
30 face contact with and coupled to the rear wall by a third fastener extending through
the rear plate and the rear wall into the core, a front plate rising from the intermediate
plate and receiving the retainer, a reinforcement web extending from the front plate
between the first and second fasteners to the intermediate plate to reinforce the front

-13-

plate, a junction reinforcement rib extending along a junction formed between the intermediate plate and the rear plate to reinforce the junction, and a plate reinforcement rib extending downwardly from the junction reinforcement rib along the rear plate to reinforce the rear plate.

5 12. The concrete screed of claim 11, wherein the front plate is inclined relative to the intermediate plate and includes an inclined bore containing a threaded sleeve included in the first anchor and the retainer includes a threaded portion mating with the threaded sleeve in an inclined channel formed in the threaded sleeve and a lever portion coupled to the threaded portion to rotate the threaded
10 portion to capture the attachment portion between the lever portion and the front plate and to release the attachment portion.

 13. The concrete screed of claim 8, wherein the first anchor includes a shoe and a quick-release retainer, the shoe is positioned on and coupled to the screed bar, and the quick-release retainer is coupled to the shoe to capture the
15 attachment portion between the quick-release retainer and the shoe and to release the attachment portion.

 14. The concrete screed of claim 13, wherein the quick-release retainer includes a shoe-engagement portion and a lever portion coupled to the shoe-engagement portion to rotate the shoe-engagement portion.

20 15. The concrete screed of claim 8, wherein the bar mover includes a second attachment portion and the mount includes a second anchor anchoring the second attachment portion to the core without the second attachment portion extending into the interior region.

 16. A concrete screed comprising
25 a frame including a first foot and a second foot,
 a screed bar including a rectangular tubular portion and a triangular tubular portion, the rectangular tubular portion having a rectangle-shaped cross-section and being formed to include a first chamber, the triangular tubular portion having a triangle-shaped cross-section and being formed to include a second chamber
30 separated from the first chamber by a common wall shared by the rectangular tubular portion and the triangular tubular portion, and

 a mount coupling the frame to the screed bar, the mount including a core positioned in the first chamber to reinforce the rectangular tubular portion, first

-14-

and second shoes positioned on the screed bar outside the first and second chambers, a first fastener coupling the first shoe to the core, a second fastener coupling the second shoe to the core, a first releasable retainer coupling the first foot to the first shoe for release therefrom, and a second releasable retainer coupling the second foot
5 to the second shoe for release therefrom.

17. The concrete screed of claim 16, wherein the mount includes a second mounting bracket positioned on the screed bar outside the first and second chambers, a second fastener extending from the second mounting bracket through the rectangular tubular portion into the core to couple the second mounting bracket to the
10 core, and a second releasable retainer coupling the frame to the second mounting bracket for release therefrom.

18. The concrete screed of claim 17, wherein the rectangular tubular portion includes a vertical rear wall parallel to the common wall and a horizontal top wall extending from the rear wall to the common wall, the first shoe
15 includes a first mounting bracket, the second shoe includes a second mounting bracket, each of the first and second mounting brackets includes an intermediate plate positioned in face-to-face contact with the top wall, a rear plate depending from a first end of the intermediate plate and extending along the rear wall in face-to-face contact therewith, and a front plate rising from a second end of the intermediate plate, the first
20 fastener extends from the intermediate plate of the first mounting bracket through the top wall into the core, the second fastener extends from the intermediate plate of the second mounting bracket through the top wall into the core, the first releasable retainer extends into a first bore formed in the front plate of the first mounting bracket, and the second releasable retainer extends into a second bore formed in the
25 front plate of the second mounting bracket.

19. The concrete screed of claim 18, wherein the mount includes third, fourth, fifth, and sixth fasteners, the third fastener extends from the intermediate plate of the first mounting bracket through the top wall into the core, the fourth fastener extends from the intermediate plate of the second mounting bracket through
30 the top wall into the core, the fifth fastener extends from the rear plate of the first mounting bracket through the rear wall into the core, and the sixth fastener extends from the rear plate of the second mounting bracket through the rear wall into the core, the first mounting bracket includes a first reinforcement web that extends from the

-15-

rear plate of the first mounting bracket to the intermediate plate of the first mounting bracket and extends between the first and third fasteners, and the second mounting bracket includes a second reinforcement web that extends from the rear plate of the second mounting bracket to the intermediate plate of the second mounting bracket and
5 extends between the second and fourth fasteners.

20. The concrete screed of claim 19, wherein each of the first, second, third, fourth, fifth, and sixth fasteners is a lag bolt.

21. The concrete screed of claim 16, wherein each of the first and second releasable retainers includes a threaded portion and a lever portion that is
10 coupled to the threaded portion to rotate the threaded portion, the threaded portion of the first releasable retainer is coupled to the first shoe, the lever portion of the first releasable retainer cooperates with the first shoe to capture the first foot therebetween, the threaded portion of the second releasable retainer is coupled to the second shoe, and the lever portion of the second releasable retainer cooperates with the second shoe
15 to capture the second foot therebetween.

22. The concrete screed of claim 16, wherein the first shoe is formed to include an inclined first channel, the second shoe is formed to include an inclined second channel, the first releasable retainer extends into the first channel and includes a first lever portion located outside the first channel and over the triangular
20 tubular portion, and the second releasable retainer extends into the second channel and includes a second lever portion located outside the second channel and over the triangular tubular portion.

23. The concrete screed of claim 16, the triangular tubular portion includes an imperforate inclined wall.